

Volume 177, Issue 1, January 2003

- 1 Editor's Choice
- 3 Editorial
J. Henriksson

THEME: THE HYPOTHALAMIC PARAVENTRICULAR NUCLEUS-NEUROMODULATORY MECHANISMS IN AUTONOMIC REGULATION

- 5 Foreword
G. M. Toney
- 7 The paraventricular nucleus: an important component of the central neurocircuitry regulating sympathetic nerve outflow
M. J. Kenney, M. L. Weiss and J. R. Haywood
- 17 Paraventricular nucleus of the hypothalamus and elevated sympathetic activity in heart failure: the altered inhibitory mechanisms
Y.-F. Li and K. P. Patel
- 27 Proposed role of the paraventricular nucleus in cardiovascular deconditioning
P. J. Mueller, J. T. Cunningham, K. P. Patel and E. M. Hassler
- 37 Nitric oxide: a local signalling molecule controlling the activity of pre-autonomic neurones in the paraventricular nucleus of the hypothalamus
J. E. Stern, Y. Li and W. Zhang
- 43 Central osmotic regulation of sympathetic nerve activity
G. M. Toney, Q. H. Chen, M. J. Cato and S. D. Stocker

- 57 Modifications to central neural circuitry during heart failure
M. L. Weiss, M. J. Kenney, T. I. Musch and K. P. Patel

MUSCLE

- 69 Strength and power changes of the human plantar flexors and knee extensors in response to resistance training in old age
A. Ferri, G. Scaglioni, M. Pousson, P. Capodaglio, J. Van Hoecke and M. V. Narici
- 79 Distribution of monocarboxylate transporter isoforms MCT1, MCT2 and MCT4 in porcine muscles
K. Sepponen, N. Koho, E. Puolanne, M. Ruusunen and A. R. Pösö
- 87 Variable frequency trains enhance torque independent of stimulation amplitude
J. M. Slade, C. S. Bickel, G. L. Warren and G. A. Dudley

RENAL

- 93 Role of prostaglandin cyclooxygenase and cytochrome P450 pathways in the mechanism of natriuresis which follows hypertonic saline infusion in the rat
E. Kompanowska-Jezierska, A. Walkowska and J. Sadowski
- 101 Instructions to authors

Volume 177, Issue 2, February 2003

- 105 Editor's choice

INVITED COMMENTARY

- 107 Kinetic model of osmosis through semipermeable and solute-permeable membranes
F. Kiil

REVIEW

- 119 Amazing chloride channels: an overview
B. Nilius and G. Droogmans

CARDIOVASCULAR

- 149 Blood flow distribution during elevated intraperitoneal pressure in the rat
P. Lindström, Ö. Källskog, J. Wadström and A. E. G. Persson
- 157 Transmitter characteristics of cutaneous, renal and skeletal muscle small arteries in the rat
O. Tarasova, N. Sjöblom-Widfeldt and H. Nilsson

- 167 Renal and hormonal responses to isotonic saline infusion after 3 days' head-down tilt vs. supine and seated positions
P. Mauran, S. Sediame, A. Pavy-Le Traon, A. Maillet, A. Carayon, C. Barthelemy, G. Weerts, A. Guell and S. Adnot

ENDOCRINOLOGY AND METABOLISM

- 177 Vasopressin increases milk flow and milk fat concentration in the goat
K. Olsson, C. Malmgren, K. K. Olsson, K. Hansson and J. Häggström

MUSCLE

- 185 Differential strain patterns of the human gastrocnemius aponeurosis and free tendon, *in vivo*
S. P. Magnusson, P. Hansen, P. Aagaard, J. Brønd, P. Dyhre-Poulsen, J. Bojsen-Møller and M. Kjaer
- 197 Myosin remodelling in the contracting A7r5 smooth muscle cell
M. E. Fultz and G. L. Wright

APS INTERNATIONAL SYMPOSIUM ON 'SYMPATHETIC NEURAL MECHANISM IN CARDIOVASCULAR CONTROL'

Foreword
M. Elam

1. FUNCTIONAL ORGANIZATION OF THE SYMPATHETIC SYSTEM

- 209 Medullary and supramedullary mechanisms regulating sympathetic vasomotor tone
R. A. L. Dampney, J. Horiuchi, T. Tagawa, M. A. P. Fontes, P. D. Potts and J. W. Polson
- 219 Are pre-ganglionic neurones recruited in a set order?
R. M. McAllen and D. Trevaks
- 227 Transmission of signals through sympathetic ganglia – modulation, integration or simply distribution?
E. M. McLachlan
- 237 Functional organization of peripheral vasomotor pathways
I. L. Gibbins, P. Jobling and J. L. Morris
- 247 Why do human postganglionic neurones primarily only fire once during a sympathetic burst?
V. G. Macefield and M. Elam
- 255 Neurophysiological analysis of target-related sympathetic pathways – from animal to human: similarities and differences
W. Jänig and H.-J. Häbler
- 275 Sympathetic nerve activity and neurotransmitter release in humans: translation from pathophysiology into clinical practice
M. Esler, G. Lambert, H. P. Brunner-La Rocca, G. Vaddadi and D. Kaye

2. PHYSIOLOGICAL REGULATION OF SYMPATHETIC NERVE ACTIVITY

- 285 Central angiotensin modulation of baroreflex control of renal sympathetic nerve activity in the rat: influence of dietary sodium
G. F. DiBona
- 291 Arousal increases baroreflex inhibition of muscle sympathetic activity
B. Gunnar Wallin, V. Donadio, T. Karlsson, M. Kallio, M. Nordin and M. Elam
- 299 Bursting into space: alterations of sympathetic control by space travel
D. L. Eckberg

- 313 Vestibular activation of sympathetic nerve activity
C. A. Ray and J. R. Carter
- 321 Effects of heat stress on baroreflex function in humans
C. G. Crandall, J. Cui and T. E. Wilson
- 329 Sympathetic vasodilation in human muscle
M. J. Joyner and N. M. Dietz

3. SYMPATHETIC NERVE ACTIVITY IN DISEASE

- 337 Sympathetic nerve activity in metabolic control – some basic concepts
J. Fagius
- 345 A leptin-sympathetic-leptin feedback loop: potential implications for regulation of arterial pressure and body fat
A. L. Mark, K. Rahmouni, M. Correia and W. G. Haynes
- 351 Sympathetic control of white adipose tissue in lean and obese humans
C. Dodt, P. Lönnroth, J. P. Wellhöner, H. L. Fehm and M. Elam
- 359 Sympathetic nerve activity in hypotension and orthostatic intolerance
T. Mano and S. Iwase
- 367 The activity of single vasoconstrictor nerve units in hypertension
D. A. S. G. Mary and J. B. Stoker
- 377 Chemoreflexes – physiology and clinical implications
T. Kara, K. Narkiewicz and V. K. Somers
- 385 Sympathetic nerve activity in obstructive sleep apnoea
K. Narkiewicz and V. K. Somers
- 391 Sympathetic activation in human heart failure: diverse mechanisms, therapeutic opportunities
J. S. Floras
- 399 Behaviour of the adrenergic cardiovascular drive in atrial fibrillation and cardiac arrhythmias
G. Grassi, G. Seravalle, G. Bertinieri and G. Mancia
- 405 Pathological sympathoexcitation: how is it achieved?
M. Elam, Y. B. Sverrisdottir, B. Rundqvist, D. McKenzie, B. Gunnar Wallin and V. G. Macefield

- 413 Editor's choice
J. Henriksson

THEME: CYCLOOXYGENASE2 AND RENAL FUNCTION

- 415 Foreword
F. J. Salazar
417 Regulation of cyclooxygenase-2 in renal medulla
T. Yang
423 Interactions between COX-2 and the renin-angiotensin system in the kidney
R. C. Harris
429 Role of cyclooxygenase-2 in the control of renal haemodynamics and excretory function
R. López, F. Roig, M. T. Llinás and F. J. Salazar

REVIEW

- 437 Electroporation: theory and methods, perspectives for drug delivery, gene therapy and research
J. Gehl

CARDIOVASCULAR

- 449 Increased contribution of α_1 - vs. β -adrenoceptor-mediated inotropic response in rats with congestive heart failure
I. Sjaastad, I. Schiander, A. Sjetnan, E. Qvigstad, J. Bøkenes, D. Sandnes, J.-B. Osnes, O. M. Sejersted and T. Skomedal
459 Effects of sex, gonadectomy, and oestrogen substitution on ischaemic preconditioning and ischaemia-reperfusion injury in mice
X. Song, G. Li, J. Vaage and G. Valen

- 467 Left ventricular volume changes during supine exercise in young endurance athletes
M. Sundstedt, T. Jonason, T. Åhrén, S. Damm, L. Wesslén and E. Henriksen

MUSCLE

- 473 Synthesis and degradation of type IV collagen in rat skeletal muscle during immobilization in shortened and lengthened positions
A. M. Ahtikoski, S. O. A. Koskinen, P. Virtanen, V. Kovanen, J. Risteli and T. E. S. Takala
483 Comparison of force-velocity relationships of vastus lateralis muscle in isokinetic and in stretch-shortening cycle exercises
T. Finni, S. Ikewawa, V. Lepola and P. V. Komi

MISCELLANEOUS

- 493 Mathematical analysis of atelectasis formation in middle ears with sealed ventilation tubes
N. Fink, A. Ar, J. Sadé and O. Barnea
507 Somato-sympathetic vasoconstriction to intranasal fluid administration with consecutive decrease in nasal nitric oxide
B. N. Landis, M. Beghetti, D. R. Morel, R. Giger, P. C. Rimensberger and J. S. Lacroix
517 Author index
521 Subject index